

**Surveillance of
Implementation and Compliance
for**

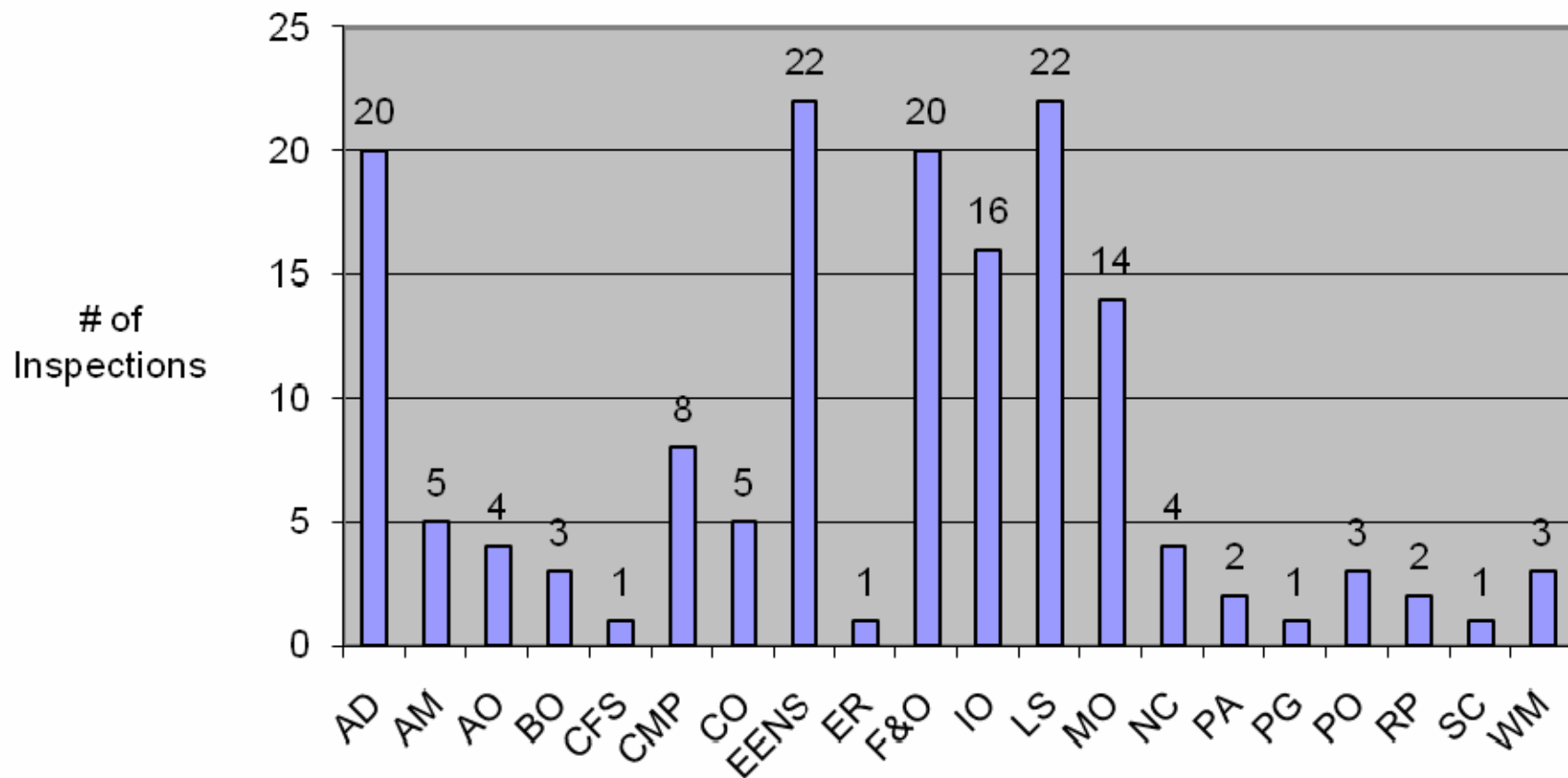
***Storage of
Incompatible Chemicals in
Flammable Cabinets***

08/20/08

Report Summary

- 157 flammable storage locations that were inspected.
- Inspections were done in 20 organizations at BNL.
- 3 locations were identified with an incompatible chemical (oxidizers) stored within a flammable storage cabinet.
- There was an average of 50 containers and 38 liters per cabinet.

Flammable Storage Inspections
By Department
August 2008



Acknowledgement:

B. Heneveld, D. Robbins, D. Hanley, F. Zanoni, L. Stiegler, K. Klaus, J. Peters, M. Rankine, C. Lichtenwalner, N. Bernholc, and W. Litzke performed the field inspections.

R. Petricek provided support from the CMS database in identifying initial locations of the flammable storage cabinets.

R. Selvey and K. Erickson developed the procedures and checklist used in the inspections and prepared the timeline for inspections.

Project Lead: J. Peters

**Surveillance of
Implementation and Compliance
for
*Chemicals That Might Become
Hazardous During Prolonged Storage:
Peroxide Forming Compounds***

08/20/08

SUMMARY

- Survey of the testing and labeling status of all peroxide forming chemicals listed in the BNL Chemical Management System (CMS) inventory.
- Each container was tested during the survey and re-labeled.
- A total of 193 containers were located in the survey.

Results

- 95% of the containers were either unopened, kept under inert gas, maintained with a septum seal, or were tested and met the SBMS testing criteria of <100 ppm peroxide.
- 3% exceeded the test criteria of 100 ppm peroxides.
- 2% had a particulate in the bottle or foreign matter at the seal that prohibited opening the container for safety reasons.
- No containers had visible crystals that would indicate an explosion hazard.

- 101 containers listed in the CMS inventory were not found during this survey (34%).
- 12 containers (4%) were identified by researchers as needing testing that were in CMS but were not on the CMS checklist as a peroxide forming compound.
 - These were tested and
 - CMS was advised to modify the CMS data if appropriate.

Status of Peroxide in Container	#	%	
Unopened Container	85	44	95%
Tested Acceptable	98	51	
Failed peroxide concentration level of 100 ppm	6	3	5%
Not tested: Had Residues that potentially could be dangerous crystals	4	2	
total	193		

Acknowledgement:

F. Horn; C. Weilandics; N. Chiu; and A. Kim for the field surveillance of existing test/label status and retesting of peroxide liquids.

R. Petricek for support from the CMS database in identifying peroxide forming chemicals containers and checklist for recording survey status.

Project Lead: R. Selvey